

(19) World Intellectual Property Organization International Bureau



10/535576

(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
WO 2004/045404 A1

(51) International Patent Classification<sup>7</sup>: A61B 5/0215, 8/12

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT (utility model), PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/DK2003/000792

(22) International Filing Date: 19 November 2003 (19.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: PA 2002 01788 19 November 2002 (19.11.2002) DK

(71) Applicant (for all designated States except US): RHINOMETRICS A/S [DK/DK]; Strandvejen 58, DK-2900 Hellerup (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RASMUSSEN, Steen, B. [DK/DK]; Birkholmvej 1, DK-3540 Lyng (DK). FOGED, Peter [DK/DK]; c/o Rhinometrics A/S, Strandvejen 58, DK-2900 Hellerup (DK).

(74) Agent: ZACCO DENMARK A/S; Hans Bekkevolds Allé 7, DK-2900 Hellerup (DK).

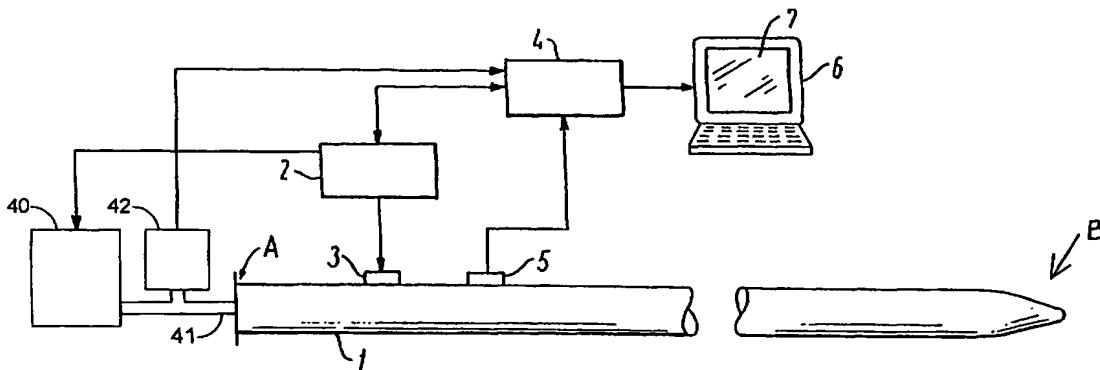
(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DEVICE AND METHOD FOR MEASURING IN BODY CAVITIES



WO 2004/045404 A1

(57) **Abstract:** A device comprising a catheter (1) with a lumen, a proximal end (A) and a closed distal end (B) for inserting into the human or animal body cavity. A signal generator (2) generates an excitation signal, and a transmitting transducer (3) transmits a corresponding acoustic signal into the lumen of the catheter. A receiving transducer (5) receives reflections of the acoustic signal from the lumen of the catheter. A low-frequency pressure transducer (42) senses the pressure in the lumen of the catheter and outputs a signal representing low-frequency pressure variations in the lumen. A signal-processing device (4, 6) receives and analyses the output signals from the receiving transducer (5) and the pressure transducer (42). Information can be obtained about the elasticity of the body cavity walls.